REMARKS

Applicants appreciate the thorough examination of the current application as evidenced by the Final Office Action dated June 23, 2005 (the "Action").

The above amendments have been made to address the rejections of Claims 46, 73-79, 94, 96-99 and 101 under 35 U.S.C. § 112, second paragraph. Entry of these amendments is requested as no new issues have been raised. In particular, Applicants have merely corrected informalities noted by the Examiner.

In the following remarks, the Applicants will show that independent Claims 45, 74, 80, 82, 86, 87, 96 and 99 are patentable over U.S. Patent No. 6,173,322 to Hu ("Hu") and U.S. Patent No. 6,421,711 to Blumenau et al ("Blumenau"), and that independent Claim 101 is patentable over Hu, Blumenau and U.S. Patent Application Publication No. 2002/0174307 to Yoshida ("Yoshida").

Reconsideration of the outstanding rejections and allowance of all claims is thus respectfully requested.

I. Claims 45, 74, 80, 82, 86, 87, 96 and 99 are patentable over Hu and Blumenau

A. Claims 45, 74, 82, 86, 87, and 96

Independent Claim 45 recites, with emphasis added, a method of serving objects in a computing network, the method including:

> receiving a request for an object stored on an intelligent storage system, the request being received by a web server, and the intelligent storage system comprising a plurality of storage devices and a control unit configured to determine a mapping for the request to one of the plurality of storage devices;
>
> evaluating the request based on criteria;
>
> if the criteria are met, redirecting the request to the control unit of the intelligent storage system; and
>
> if the criteria are not met, serving the stored object via the web server.

Independent Claims 74, 82, 86, 87, and 96 similarly recite redirecting the request to the control unit of the intelligent storage system.

The Action concedes that Hu does not disclose an intelligent storage system including a plurality of storage devices and a control unit configured to determine a mapping for the

request to one of the plurality of storage devices. The Action concludes that it would be obvious to modify Hu by implementing a storage system of Blumenau. The system of Blumenau includes a storage controller, which the Action alleges is equivalent to the control unit as recited in the current claims. The Action states that one of ordinary skill would be motivated to so modify Hu because "first it would have reduced the increasing cost of management by reducing the number of storage objects to be managed, secondly the storage controller would have controlled access to the data storage (Blumenau, col. 1 L18 to col. 2 L45) and third it would have provided an efficient storage system with increased storage capacity. *See* the Action, pages 4-5.

However, Hu specifically discusses that a direct connection between the content server and the client would result in "significantly more efficient communication." (Hu, col. 12, lines 19-34). Hu teaches away from a redirect link that is configured to redirect the request to the control unit of the intelligent storage system rather than a direct connection to the storage device. The redirect mode proposed by Hu returns to the requesting client whatever information is required to enable the client to establish a direct connection with the content server. (Hu, col. 3, lines 8-10.) Therefore, the redirect mode of Hu is not equivalent to the redirect link as recited in the current claims, and it would not be obvious to modify the redirect mode proposed by Hu to include the storage controller of Blumenau.

For the reasons discussed above, Applicants submit that independent Claims 45, 74, 82, 86, 87, and 96 are patentable over the cited art. Claims 46-73 depend from Claim 45, Claims 75-79 depend from Claim 74, Claims 83-85 depend from Claim 82, Claims 88-95 depend from Claim 87 and Claims 97-98 depend from Claim 96. These claims are patentable at least per the patentability of the claims from which they depend.

Claims 80 and 99

Claim 80 recites, with emphasis added, a method of serving large objects, the method comprising:

> receiving a request for a particular object stored on an intelligent storage system comprising a plurality of storage devices and a control unit configured to determine a mapping for the request to one of the plurality of storage devices;

creating a redirect link on one or more web servers from which the particular object may be requested; and

serving the particular object from one of the plurality of storage devices via the control unit of the intelligent storage system using the redirect link or through a selected one of the web servers using the object serving link.

Claim 99 similarly recites "computer program code configured to serve the particular object from one of the plurality of storage devices via the control unit of the intelligent storage system using the redirect link..."

As noted above, the Action concedes that Hu does not disclose an intelligent storage system including a plurality of storage devices and a control unit configured to determine mapping for the request to one of the plurality of storage devices. The Action states that it would be obvious to combine Hu with Blumenau for the same reasons discussed with respect to Claim 45, which include providing "an efficient storage system with increased storage capacity. *See*, the Action, pages 4-5 and 9-10.

As discussed above, Hu discusses that a direct connection between the content server and the client would result in "significantly more efficient communication." (Hu, col. 12, lines 19-34). Therefore, Hu teaches away from serving the particular object from one of the plurality of storage devices via the control unit of the intelligent storage system using the redirect link as recited in Claims 80 and 99. The redirect mode of Hu is not equivalent to the redirect link as recited in Claims 80 and 99, and it would not be obvious to modify the redirect mode proposed by Hu to include the storage controller of Blumenau.

For the reasons discussed above, Applicants submit that independent Claims 80 and 99 are patentable over the cited art. Claim 81 depends from Claim 80 and is patentable at least per the patentability of Claim 81.

II. Claim 101 is patentable over Hu, Blumenau and Yoshida

The Action states that Claim 101 stands rejected for the same reasons as set forth with respect to Claims 74-76 and 78-79.

Specifically, Claim 101 recites a method of creating a link to an object, the method including:

receiving a request for a particular object in an intelligent storage system comprising a plurality of storage devices and a control unit configured to determine a mapping for the request to one of the plurality of storage devices;

evaluating characteristics of the particular object;

creating a redirect link on one or more web servers from which the particular object may be requested if the evaluated characteristics of the particular object meet criteria, the redirect link being configured to redirect the request to the control unit of the intelligent storage system;

creating an object serving link on the one or more of the web servers if the evaluated characteristics of the particular object do not meet the criteria;

wherein the redirect link enables returning a direct status code to a requester of the object and wherein the contents of the redirect link are manually created; and

requesting establishment of a subsequent connection automatically in response to receiving the redirect status code for retrieving the particular object directly from the intelligent storage system;

wherein the intelligent storage system comprises network-attached storage.

Applicants submit that the cited references do not teach or suggest at least the above-underlined recitations.

Claim 101 recites that the redirect link is configured to redirect the request to the control unit of the intelligent storage system. As noted with respect to the rejection of Claims 45, 74, 80, 82, 86, 87, 96 and 99, Hu discusses that a direct connection between the content server and the client would result in "significantly more efficient communication." (Hu, col. 12, lines 19-34). Therefore, Hu teaches away from redirect link is configured to redirect the request to the control unit of the intelligent storage system.

In addition, Hu does not teach or suggest a redirect link that enables returning a redirect status code to a requester of the object. It is noted that this deficiency of Hu was discussed in the Supplemental Amendment filed April 15, 2005. Page 8 of the Action merely reiterates the original rejection and does not address the deficiencies of Hu discussed in the Supplemental Amendment filed April 15, 2005. In particular, page 8 of the Action cites column 12, lines 43-52 of Hu as disclosing a redirect link that enables returning a redirect status code to a request of the object. However, the cited portion of Hu merely discusses that

the redirect module **212** responds to the client **104** with whatever information is necessary according to the particular wide-area network protocol for the client **104** to contact the content server directly. Therefore, Hu proposes forwarding information so that the client **104** can contact the content server directly, but Hu fails to disclose a redirect link that includes a status code. As discussed in the Specification of the current application, a status code can include information about the redirect link, for example, whether the requested file was found, temporarily located at another address, permanently located at another address, etc. *See* Specification, page 16, line 15 – page 17, line 4.

Moreover, neither Hu nor Blumenau discloses that the contents of the redirect link are manually created. Page 9 of the Action concedes that neither Hu nor Blumenau discloses this feature, but states that

> it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Hu in view of Blumenau in order to creat the contents of the redirect link manually. One of ordinary skill in the art would have motivated (sic) because it would have enabled a web site developer or an administrator to redirect traffic to an appropriate destination.

Applicants submit that the Action does not satisfy the requirements for an obviousness rejection under § 103, which requires that there be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. The Action does not point out any suggestion or motivation in the cited references or in knowledge generally available to one of ordinary skill in the art to support this modification of Hu and Blumenau. Hu and Blumenau do not suggest reducing software development costs by manually creating the contents of a redirect link. In fact, Hu proposes a policy module **206** that assesses the current dynamic metric for a group of servers and selects one content server to service the client request. Hu, col. 12, lines 15-18. Therefore, Hu proposes dynamically creating a redirect link and teaches away from manually creating the contents of a redirect link as recited in Claim 101.

Additionally, Hu does not teach or suggest requesting the establishment of a subsequent connection automatically in response to receiving the redirect status code for

retrieving the particular object directly from the intelligent storage system. Page 7, lines 17-20 of the Action states that this recitation is disclosed in column 12, lines 35-40 and column 18, lines 47-51 of Hu. However, as discussed above, Hu does not teach or suggest a redirect status code. Therefore, requesting the establishment of a subsequent connection automatically does not occur in response to receiving the redirect status code as recited in Claim 101.

Hu also does not teach or suggest that the intelligent storage system comprises network-attached storage. The Action concedes that Hu and Blumenau do not disclose that the intelligent storage system is network-attached storage, but states that network-attached storage is disclosed by Yoshida. The Action then concludes that it would have been obvious to incorporate the network-attached storage of Yoshida

> because a network attached storage device is a self-contained, intelligent storage appliance that attaches directly to a local area network and transfers data typically over network protocols. NAS devices would have provided shared data storage space and would have also provided a rapidly emerging new technology for workstations and servers (Yoshida, page 1 block #3).

Applicants respectfully disagree. The cited portions of Yoshida merely provides general advantages of a network-attached storage system. None of the references provides any motivation to modify Hu or Blumenau.

For at least these reasons, Applicants submit that Claim 101 is patentable over Hu, Blumenau and Yoshida.

CONCLUSION

In light of the above amendments and remarks, Applicants respectfully submit that the above-entitled application is now in condition for allowance. Favorable reconsideration of this application, as amended, is respectfully requested.

Respectfully submitted,

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